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ELECTRICAL ABBREVIATIONS

A	AMP		
AFF	ABOVE FINISHED FLOOR		
AIC	AMPS INTERRUPTING CAPACITY	NF	NON-FUSED
AL	ALUMINUM	OCP	OVERCURRENT PROTECTION
ATS	AUTOMATIC TRANSFER SWITCH	OP	OUTPUT OR ISOLATION CONTACTOR
BP	BYPASS CONTACTOR		
CB	CIRCUIT BREAKER	OL	OVERLOAD SENSOR OR RELAY
CFM	CUBIC FEET PER MINUTE	P	POLE
CKT	CIRCUIT	PH	PHASE
CU	COPPER, COMPRESSOR UNIT	UG, U	GUNDERGROUND
DN	DOWN	V	VOLT
E	EXISTING	VFD	VARIABLE FREQUENCY AC MOTOR DRIVE
EC	EMPTY CONDUIT	VA	VOLTAMPS
GFI	GROUND FAULT INTERRUPTER	W	WATTS
GND	GROUND	WP	WEATHER PROOF
HDSS	HEAVY DUTY SAFETY SWITCH	XFMR	TRANSFORMER
HMI	HUMAN MACHINE INTERFACE		
HR	HOUR		
HP	HORSE POWER		
IG	ISOLATED GROUND		
KVA	KILOVOLT AMPS		
KW	KILOWATTS		
NEC	NATIONAL ELECTRICAL CODE		
NEMA	NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION		

ELECTRICAL SYMBOLS

\$	SINGLE POLE TOGGLE SWITCH - 20 AMP, 120 VOLT, M.H. 48" AFF, UNLESS NOTED OTHERWISE.
\$3	THREE WAY TOGGLE SWITCH - 20 AMP, 120 VOLT, M.H. 48" AFF, UNLESS NOTED OTHERWISE.
\$M	MOTOR RATED SWITCH WITH THERMAL OVERLOAD PROTECTION, MOUNT ADJACENT TO OR ON THE MOTOR BEING CONTROLLED.
Ⓜ	JUNCTION BOX, CEILING OR WALL MOUNTED.
Ⓢ	DUPLEX GROUNDING TYPE RECEPTACLE - 20 AMP, 120 VOLT, NEMA 5-20R, M.H. 18" AFF, UNLESS NOTED OTHERWISE.
Ⓢ	DOUBLE DUPLEX GROUNDING TYPE RECEPTACLE - 20 AMP, 120 VOLT, NEMA 5-20R, M.H. 18" AFF, UNLESS NOTED OTHERWISE.
Ⓢ	DUPLEX RECEPTACLE WITH GROUND FAULT CIRCUIT INTERRUPTER PROTECTION - 20 AMP, 120 VOLT, NEMA 5-20R, M.H. 42" AFF, UNLESS NOTED OTHERWISE.
Ⓢ	DISCONNECT SWITCH, AMP, VOLT, POLES AND FUSING AS NOTED ON DRAWING.
Ⓢ	ELECTRIC MOTOR CONNECTION - HORSEPOWER AS NOTED.
Ⓢ	POWER COMPANY METER, RATING AS INDICATED ON DRAWING.
Ⓢ	BRANCH CIRCUIT CONDUIT AND WIRING WITH A DEDICATED EQUIPMENT GROUND WIRE. CROSSMARKS AND NUMERALS INDICATE NUMBER AND SIZE OF CONDUCTORS, AND SHOWN ONLY WHERE REQUIRED FOR CLARITY.
Ⓢ	BRANCH CIRCUIT CONDUIT AND WIRING WITH A DEDICATED EQUIPMENT GROUND WIRE, UNDER GROUND OR UNDER SLAB. CROSSMARKS AND NUMERALS INDICATE NUMBER AND SIZE OF CONDUCTORS, AND SHOWN ONLY WHERE REQUIRED FOR CLARITY.
Ⓢ	HOMERUN WIRING WITH A DEDICATED EQUIPMENT GROUND WIRE TO THE REFERENCED PANELBOARD. ARROW HEADS AND NUMERALS INDICATE THE CIRCUIT NUMBERS.
Ⓢ	CONDUIT SEALING FITTING

— — —	CONTACT - NORMALLY OPEN
— /— —	CONTACT - NORMALLY CLOSED
— — —	OVERLOAD RELAY HEATER
— — —	MAGNETIC STARTER WITH NEMA SIZE INDICATED
— — —	CIRCUIT BREAKER, MAGNETIC TRIP ONLY, FRAME SIZE SHOWN, 3 POLE UNLESS INDICATED OTHERWISE.
— — —	FUSED SWITCH, SWITCH AND FUSE CURRENT RATING INDICATED, 3 POLE UNLESS INDICATED OTHERWISE.
— — —	SWITCH - CURRENT RATING INDICATED, 3 POLE UNLESS INDICATED OTHERWISE.
— — —	LIGHTNING ARRESTER
— — —	FUSE
— — —	GROUND
— — —	TRANSFORMER, SECONDARY VOLTAGES, PHASE AND RATING INDICATED AS APPLICABLE
— — —	PUSH-BUTTON SWITCH, MOMENTARY CONTACT, NORMALLY OPEN
— — —	PUSH-BUTTON SWITCH, MOMENTARY CONTACT, NORMALLY CLOSED
— — —	REMOTE DEVICE
— — —	SELECTOR SWITCH - MAINTAINED CONTACT - CHART IDENTIFIES OPERATION:
— — —	CURRENT TRANSFORMER
— — —	INDICATING LIGHT - LETTER INDICATES COLOR
— — —	MOTOR CIRCUIT PROTECTOR TYP COMBINATION STARTER.
— — —	RED MUSHROOM HEAD EMERGENCY STOP PUSHBUTTON. MOUNT UP 4' ON STAINLESS STEEL ELECTRICAL CHANNEL. XP INDICATES EXPLOSION PROOF.

ELECTRICAL SYMBOLS CONT'D

DP	DIFFERENTIAL PRESSURE FLOW SWITCH. XP INDICATES EXPLOSION PROOF.
L	HATCH LIMIT SWITCH, NEMA 4X EXCEPT XP INDICATES CLASS 1 DIV. 1 USE.
C	FAN SPEED CONTROL
— — —	LIMIT SWITCH
— — —	NOTC TIMING RELAY CONTACT NORMALLY OPEN TIMED CLOSED
— — —	NCTO TIMING RELAY CONTACT NORMALLY CLOSED TIMED OPEN
— — —	NOTO TIMING RELAY CONTACT NORMALLY OPEN TIMED OPEN
— — —	TCO TIMING RELAY CONTACT NORMALLY CLOSED TIMED CLOSED
— — —	TEMPERATURE SWITCH
— — —	FLOAT SWITCH
— — —	RORC MAGNETIC RELAY COIL
480/3	EQUIPMENT VOLTAGE
— — —	INDICATES PHASE
— — —	INDICATES VOLTAGE

CONDUIT & WIRE SIZE SCHEDULE

(UNLESS OTHERWISE SHOWN)

CIRCUIT BREAKER TRIP	GROUND WIRE SIZE	1 OR 2 POLE		3 POLE	
		CONDUIT	WIRE	CONDUIT	WIRE
15A	1 #12	1/2"	#12	1/2"	#12
20A	1 #12	1/2"	#12	1/2"	#12
30A	1 #10	1/2"	#10	3/4"	#10
40A	1 #10	3/4"	#8	1"	#8
50A	1 #10	3/4"	#8	1"	#8
60A	1 #8	1"	#6	1"	#6
70A	1 #8	1"	#4	1-1/4"	#4
80A	1 #8	1-1/4"	#4	1-1/4"	#4
90A	1 #8	1-1/4"	#2	1-1/4"	#2
100A	1 #8	1-1/4"	#2	1-1/4"	#2

LIGHTING FIXTURE SCHEDULE

SYMBOL	DESCRIPTION	LAMP	MANUFACTURER AND TYPE	REMARKS
Ⓢ	PENDANT MOUNT WET LOCATION CORROSION RESISTANT FLUORESCENT. ALUMINUM BODY, ACRYLIC DIFFUSER	2-32W T8	LITHONIA EIS-2-32 OR APPROVED EQUAL	ELECTRONIC BALLAST RATED TO -17C.

SITE PULL & JUNCTION BOX SCHEDULE

LOCATION	WIDTH	LENGTH	DEPTH	TYPE
STRIPPER PUMP STATION	13	24	18	2
STRIPPER PUMP STATION	13	24	18	1
ELECTRIC SERVICE SHELTER	17	30	18	2
ELECTRIC SERVICE SHELTER	17	30	30	1
ELECTRIC SERVICE SHELTER	17	30	30	3
ELECTRIC SERVICE SHELTER	17	30	30	4 SCADA

SEE SHEET E-02 FOR BOX LOCATIONS.

PULL & JUNCTION BOX TYPE

TYPE	DESCRIPTION
1	POLYMER CONCRETE, SOLID BOTTOM BOX WITH GASKETED SOLID COVER LABELED "CONTROLS". SUITABLE FOR ANSI 77 TIER 15 LOADING, QUARTZITE OR EQUAL.
2	SAME AS TYPE 1 EXCEPT COVER LABELED "POWER".
3	SAME AS TYPE 1 EXCEPT COVER LABELED SIGNAL.
4	SAME AS TYPE 1 EXCEPT COVER LABELED COMMUNICATIONS.

GENERAL ELECTRICAL CONSTRUCTION NOTES

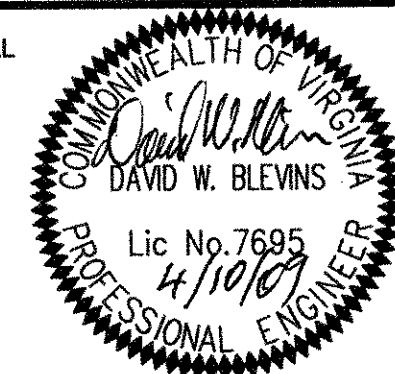
- THE DRAWINGS INDICATE THE EXTENT AND GENERAL ARRANGEMENT OF THE ELECTRICAL SYSTEMS
- LOCATIONS OF LINES AND EQUIPMENT SHALL BE DETERMINED FROM ACTUAL FIELD CONDITIONS. THE OUTLINES OF THE CONSTRUCTION SHOWN ON THE ELECTRICAL DRAWINGS ARE INTENDED ONLY AS A GUIDE TO INDICATE RELATIVE LOCATIONS OF THE WORK. REFER TO THE EQUIPMENT SUPPLIER'S INSTALLATION INSTRUCTIONS FOR EXACT LOCATIONS AND ARRANGEMENTS.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE COORDINATION AND PROPER RELATION OF HIS WORK TO THE FACILITY STRUCTURES AND TO THE WORK OF OTHER TRADES. NO ADDITIONAL COMPENSATION NOR EXTENSION OF COMPLETION TIME WILL BE GRANTED FOR EXTRA WORK CAUSED BY THE LACK OF COORDINATION.
- DUE TO MINOR DIFFERENCES IN VARIOUS MANUFACTURER'S EQUIPMENT CONNECTIONS THE ELECTRICAL CONTRACTOR SHALL COORDINATE HIS INSTALLATION WITH THAT EQUIPMENT ACTUALLY FURNISHED AND SHALL VERIFY THE CORRECT SIZES AND DETAILS OF INSTALLATION BEFORE ROUGHING IN.
- THE ELECTRICAL CONTRACTOR SHALL CONSULT WITH THE GENERAL CONTRACTOR REGARDING THE LOCATION OF EQUIPMENT, DOOR SWINGS, BLOCK COURSING, ALIGNMENT OF THIS AND OTHER SIMILAR FEATURES BEFORE ROUGHING IN FOR SWITCHES, RECEPTACLES, THERMOSTATS, AND SIMILAR WIRING DEVICES.
- THE CORRECT NUMBER OF WIRES IS NOT INDICATED FOR MOST BRANCH CIRCUITS, ONLY THOSE WHERE CLARIFICATION IS NECESSARY. THE ELECTRICAL CONTRACTOR SHALL PROVIDE ALL WIRES NECESSARY FOR THE PROPER FUNCTION OF THE SYSTEM.
- ALL WORK SHALL COMPLY WITH THE 2003 EDITION OF THE BUILDING CODE, THE 2002 INTERNATIONAL BUILDING CODE AND THE NATIONAL ELECTRICAL CODE NFPA 70, AND APPLICABLE LOCAL REGULATIONS.
- THE CONTRACTOR SHALL INSTRUCT THE OWNER IN THE PROPER OPERATION AND MAINTENANCE OF ALL ELEMENTS OF THE ELECTRICAL SYSTEM.



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LOUDOUN COUNTY SOLID
WASTE MANAGEMENT
FACILITY
LEACHATE PUMP STATIONS
& FORCE MAIN
LOUDOUN COUNTY, VIRGINIA

SEAL



SCALE

No.	DATE	BY	Description
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REVISIONS

DRAWN BY	YR
APPROVED BY	DB
CHECKED BY	DB
DATE	4/7/09

TITLE

ELECTRICAL
NOTES AND
ABBREVIATIONS

PROJECT NO. 50006147

E-01

SHEET NO.

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